

# MATERIAL SAFETY DATA SHEET

Name: **ETHYL ACRYLATE**

Synonym: **2-Propenoic acid, ethyl ester**

CAS: **140-88-5**

## Section 1 - Chemical Product

MSDS Name: **Ethyl acrylate 99+%**

Synonym: **2-Propenoic acid, ethyl ester**

## Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Name

CAS# **140-88-5** Ethyl acrylate

content EINECS#

> 99 205-438-8

Hazard Symbols: **XN F**

Risk Phrases: **11 20/21/22 36/37/38 43**

## Section 3 - HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Light sensitive.

### Potential Health Effects

Eye:

Causes eye irritation.

Skin:

Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

May be harmful if absorbed through the skin.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of large amounts may cause CNS depression. May be harmful if swallowed.

Inhalation:

May be harmful if inhaled. May cause irritation of the mucous membranes.

Chronic:

Cancer suspect agent.

## Section 4 - FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:

Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cups of milk or water.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

## Section 5 - FIRE FIGHTING MEASURES

### General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. May accumulate static electrical charges, and may cause ignition of its own vapors. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire.

### Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Water may be ineffective. Water spray may cause frothing. Do NOT use straight streams of water.

## Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

## Section 7 - HANDLING and STORAGE

### Handling:

Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid breathing vapor or mist. Pure vapor will be uninhibited and may polymerize in vents or other confined spaces.

### Storage:

Keep away from heat, sparks, and flame. Store in a cool, dry, well-ventilated area away from incompatible substances.

Flammables-area. Keep refrigerated. (Store below 4°C/39°F.) Store protected from light. Do not store under inert atmosphere.

## Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits CAS# 140-88-5: United Kingdom, WEL - TWA: 5 ppm TWA; 21 mg/m<sup>3</sup> TWA United Kingdom, WEL - STEL: 15 ppm STEL; 62 mg/m<sup>3</sup> STEL United States OSHA: 25 ppm TWA; 100 mg/m<sup>3</sup> TWA Belgium - TWA: 5 ppm VLE; 20 mg/m<sup>3</sup> VLE Belgium - STEL: 15 ppm VLE; 62 mg/m<sup>3</sup> VLE France - VME: 5 ppm VME; 20 mg/m<sup>3</sup> VME Germany: 5 ppm TWA; 21 mg/m<sup>3</sup> TWA Germany: Skin absorber Netherlands: 5 ppm MAC; 20 mg/m<sup>3</sup> MAC Russia: 5 mg/m<sup>3</sup> TWA Spain: 5 ppm VLA-ED; 21 mg/m<sup>3</sup> VLA-ED Spain: 15 ppm VLA-EC; 62 mg/m<sup>3</sup> VLA-EC CAS# 150-76-5: Belgium - TWA: 5 mg/m<sup>3</sup> VLE France - VME: 5 mg/m<sup>3</sup> VME Germany: 5 mg/m<sup>3</sup> TWA Malaysia: 5 mg/m<sup>3</sup> TWA Netherlands: 5 mg/m<sup>3</sup> MAC Spain: 5 mg/m<sup>3</sup> VLA-ED Personal Protective Equipment Eyes: Wear chemical splash goggles.

### Skin:

Wear appropriate protective gloves to prevent skin exposure.

### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

### Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: colorless

Odor: unpleasant odor

pH: Not available.

Vapor Pressure: 38.6 mm Hg @ 25 deg C

Viscosity: Not available.

Boiling Point: 99 deg C

Freezing/Melting Point: -71 deg C

Autoignition Temperature: 372 deg C ( 701.60 deg F)

Flash Point: 9 deg C ( 48.20 deg F)

Explosion Limits, lower: 1.4%

Explosion Limits, upper: 14.0%

Decomposition Temperature:

Solubility in water: Slightly soluble.

Specific Gravity/Density: .9200 g/cm<sup>3</sup>

Molecular Formula: C<sub>5</sub>H<sub>8</sub>O<sub>2</sub>

Molecular Weight: 100.12

## Section 10 - STABILITY AND REACTIVITY

### Chemical Stability:

Stable only if stored and handled under recommended conditions. The stability of the product depends upon the availability of both dissolved oxygen and MEHQ inhibitor(CAS=150-76-5). The presence of oxygen is necessary for the MEHQ to function effectively. The product should never be stored under an inert gas atmosphere, but should always be stored under an atmosphere containing 5-21% oxygen by volume.

### Conditions to Avoid:

Light, ignition sources, excess heat, loss of inhibitor.

### Incompatibilities with Other Materials:

Strong oxidizing agents, strong acids, amines, peroxides, chlorosulfonic acid, moisture, strong alkalis.

### Hazardous Decomposition Products:

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: May occur.

#### Section 11 - TOXICOLOGICAL INFORMATION

##### RTECS#:

CAS# 140-88-5: AT0700000 CAS# 150-76-5: SL7700000 LD50/LC50:

CAS# 140-88-5: Draize test, rabbit, eye: 45 mg Mild; Draize test, rabbit, eye: 1204 ppm/7H; Draize test, rabbit, skin: 10 mg/24H Mild; Inhalation, mouse: LC50 = 16200 mg/m<sup>3</sup>; Inhalation, rat: LC50 = 1414 ppm/4H; Oral, mouse: LD50 = 1799 mg/kg; Oral, rabbit: LD50 = 370 mg/kg; Oral, rat: LD50 = 800 mg/kg; Skin, rabbit: LD50 = 500 uL/kg.

CAS# 150-76-5: Draize test, rabbit, skin: 6 gm/12D (Intermittent) Mild; Draize test, rabbit, skin: 10%; Oral, rat: LD50 = 1600 mg/kg.

##### Carcinogenicity:

Ethyl acrylate - California: carcinogen, initial date 7/1/89 IARC: Group 2B carcinogen Hydroquinone monomethyl ether - Not listed by ACGIH, IARC, or NTP.

##### Other:

See actual entry in RTECS for complete information.

#### Section 12 - ECOLOGICAL INFORMATION

##### Ecotoxicity:

Fish: Goldfish: LC50 = 20 mg/L; 72 Hr.; Unspecified

#### Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - TRANSPORT INFORMATION

##### IATA

Shipping Name: Ethyl Acrylate, Stabilized

Hazard Class: 3

UN Number: 1917

Packing Group: II

##### IMO

Shipping Name: Ethyl Acrylate, Stabilized

Hazard Class: 3

UN Number: 1917

Packing Group: II

##### RID/ADR

Shipping Name: Ethyl Acrylate, Stabilized

Hazard Class: 3

UN Number: 1917

Packing group:

USA RC: CAS# 140-88-5: 1000 lb final RQ; 454 kg final RQ

#### Section 15 - REGULATORY INFORMATION

##### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

##### Risk Phrases:

R 11 Highly flammable.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 43 May cause sensitization by skin contact.

##### Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 36/37 Wear suitable protective clothing and gloves.

##### WGK (Water Danger/Protection)

CAS# 140-88-5: 2

CAS# 150-76-5: 1

##### Canada

CAS# 140-88-5 is listed on Canadas DSL List.

CAS# 150-76-5 is listed on Canadas DSL List.

CAS# 140-88-5 is listed on Canadas Ingredient Disclosure List.

CAS# 150-76-5 is listed on Canadas Ingredient Disclosure List.

##### US FEDERAL

##### TSCA

CAS# 140-88-5 is listed on the TSCA inventory.

CAS# 150-76-5 is listed on the TSCA inventory.